

ADDITIONAL NOTES ON THE ERIOCAULACEAE. LXXVI

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SYNGONANTHUS NITENS var. KOERNICKEI Ruhl.

Additional bibliography: Moldenke, *Phytologia* 28: 440 (1974), 31: 382 & 386 (1975), 36: 75 & 78 (1977), and 37: 270 & 273--275. 1977.

Ruhland (1903) describes this variety as "Differt vaginis glabris vel sparse patentissimo-pilosis; pedunculis gracillimis", basing it on G. Gardner 5279 from Minas Gerais, Brazil, and Weddell 1914 from "Stümpfen bei Salitre", also Minas Gerais. Obviously this is the same taxon as Körnicke's Paepalanthus nitens var. P based on the same cotypes, but Körnicke describes it as "vaginis pilis brevissimis arcte appressis puberulis; pedunculis rigidulis".

Recent collectors describe the plant as a palustrine herb, to 30 cm. tall, the leaves in basal rosettes, the inflorescence-heads grayish or gray-white, and the flowers white. They have found it growing in wet places on campos and on wet slopes among sedges, at 700--1000 m. altitude, flowering and fruiting in August and September. Irwin and his associates report it as "common on wet sandy periodically flooded creekbanks", "locally common, the heads rising to the level of the surrounding grasses on wet slopes", and "locally common, forming dense stands among grasses in cerrado". Silveira (1928) cites A. Silveira 718 from Serra do Cipó, Minas Gerais, collected in 1921.

Material of this variety has been misidentified and distributed in some herbaria under the designations Paepalanthus nitens var. Y Körn., Syngonanthus gracilis Ruhl., S. gracilis var. aurea Ruhl., S. nitens (Bong.) Ruhl., and S. nitens var. filiformis (Bong.) Ruhl. On the other hand, the Hatschbach 8488, distributed as S. nitens var. koernickei, seems better placed as var. filiformis and Hassler 9430 is var. hirtulus.

Additional citations: COLOMBIA: Vaupés: Humbert & Schultes 27319 (P). BRAZIL: Bahia: Lützelburg 1519 (Mu). Distrito Federal: Irwin & Soderstrom 5229 (Ld, N, W--2759027), 5824 (Ld, N, N, W--2759026), 5981 (N); Irwin, Souza, & Reis dos Santos 7867 (Ac, N). Mato Grosso: Harley 11532 (K). Paraná: Hatschbach 156 (Sp--53968), 8488 (Z); F. C. Hoehne s.n. [6-11-28] (Sp--23453); Krieger 1004 (Sp--51438). São Paulo: Brade 6591 (Mu); Lankester s.n. [São Paulo, 4.VI.1937] (K). State undetermined: Sellow C.271 [Serra do San Antonio] (B). PARAGUAY: Hassler 4671 (Ca--944904, N), 9436 (Ca--950383, Mi, N, V--7007), 9436a (Ca--929543, N), 9436b (Ca--950382, N, V--7006).

SYNGONANTHUS NITENS f. MALLII Moldenke, Phytologia 4: 129. 1952.

Bibliography: Moldenke, Phytologia 4: 129 (1952) and 4: 326. 1953; Moldenke, Biol. Abstr. 27: 984. 1953; Moldenke, Résumé 108 & 492. 1959; Moldenke, Fifth Summ. 1: 175 (1971) and 2: 964. 1971.

This form differs from the typical form and all other described varieties in having the leaves closely appressed-pilose, the hairs whitish and often reflexed.

Additional citations: BRAZIL: Mato Grosso: Malmé 1966a (W-1483447--isotype).

SYNGONANTHUS NITENS f. PILOSUS Moldenke, Phytologia 4: 129-130. 1962.

Bibliography: Moldenke, Phytologia 4: 129-130 (1952) and 4: 326. 1953; Moldenke, Biol. Abstr. 27: 984. 1953; Moldenke, Résumé 108 & 492. 1959; Moldenke, Fifth Summ. 1: 175 (1971) and 2: 964. 1971; Moldenke, Phytologia 31: 386 (1975), 36: 75 (1977), and 37: 270. 1977.

This form differs from the typical form of the species and all other named forms and varieties in having its leaves spreading-pilose.

Recent collectors have found the plant growing in cerrado and in sandy pantanal, in wet ground at the edge of brejo (sedge meadow), and in marshy areas in cerrado on watersheds, at altitudes of 700-900 m., flowering and fruiting in July and August.

The Rosa collection cited below does not appear to exhibit the spreading-pilose pubescence on the basal leaves, but otherwise the leaves seem to be identical with those of other collections of this form and not with those characteristic of the species in its typical form or other named forms and varieties. It is placed here tentatively.

Material of this form has been misidentified and distributed in herbaria as S. gracilis (Körn.) Ruhl. and S. nitens (Bong.) Ruhl.

Additional citations: BRAZIL: Goiás: Macedo 3353 (N). Mato Grosso: P. W. Richards 6486 (N, Z); Swallen 9611 (N, W-1933187). Rondônia: Maguire, Murça Pires, & Silva 56230 (N), 56459 (N, S); N. A. Rosa 477 [Herb. IPEAN 149907] (Ld). São Paulo: Brade 6578 (Mu).

SYNGONANTHUS NITENS var. VIVIPARUS Moldenke, Phytologia 25: 223. 1973.

Synonymy: Stachytarpheta nitens var. viviparus Hocking, Excerpt. Bot. A. 23: 292, sphalm. 1974.

Bibliography: Moldenke, Biol. Abstr. 56: 69. 1973; Moldenke, Phytologia 25: 223 & 230. 1973; Anon., Biol. Abstr. 56 (1): B.A. S.I.C. S.254. 1974; Hocking, Excerpt. Bot. A. 23: 292. 1974; Moldenke, Phytologia 28: 463 (1974) and 30: 74. 1975.

This variety differs from the typical form of the species and all other named forms and varieties in its much smaller stature, the leaves only about 1 cm. in length, the peduncles 5-15 cm.

long, and the flower-heads often conspicuously viviparous with the involucreal bractlets becoming leaf-like and 1--8 pedunculate plantlets 2--3 cm. long developing per head.

The type collection is a mixture with Paepalanthus manicatus V. A. Pouls.

Citations: BRAZIL: Bahia: Irwin, Harley, & Smith 32510 (N-isotype, Z-type).

SYNGONANTHUS NITIDUS (Bong.) Ruhl. in Engl., Pflanzenreich 13 (4-20): 271. 1903.

Synonymy: Eriocaulon nitidum Bong., Mém. Acad. Imp. Sci. St. Pétersb., ser. 6, 1: 636. 1831 [not E. nitidum Blume, 1832, nor Buch.-Ham., 1832, nor Hort., 1831]. Paepalanthus nitidus Kunth, Enum. Pl. 3: 528. 1841. Dupatya nitida (Bong.) Kuntze, Rev. Gen. Pl. 2: 746. 1891. Dupatya nitida Kuntze apud Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902.

Bibliography: Bong., Mém. Acad. Imp. Sci. St. Pétersb., ser. 6, 1: 636 (1831) and ser. 6, 2: 226--227, pl. 14. 1832; Bong., Ess. Monog. Erioc. 35, 63--64, & 226--227, pl. 14. 1832; Steud., Nom. Bot., ed. 2, 1: 585. 1840; Kunth, Enum. Pl. 3: 528, 579, 613, & 625. 1841; D. Dietr., Syn. Pl. 5: 262. 1852; Steud., Syn. Pl. Glum. 2: [Cyp.] 281 & 334. 1855; Körn. in Mart., Fl. Bras. 3 (1): 309, 437--438, & 507. 1863; Kuntze, Rev. Gen. Pl. 2: 746. 1891; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 879 (1893) and imp. 1, 2: 402. 1894; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 271, 272, 286, & 293. 1903; Frain, Ind. Kew. Suppl. 3: 175. 1908; Alv. Silv., Fl. Mont. 1: 419. 1928; Stapf, Ind. Lond. 3: 91. 1930; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 145. 1941; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 879 (1946) and imp. 2, 2: 402. 1946; Moldenke, Known Geogr. Distrib. Erioc. 19, 30, 38, 51, & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 92 & 213. 1949; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 145. 1959; Moldenke, Résumé 108, 281, 290, 326, & 492. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 879 (1960) and imp. 3, 2: 402. 1960; Moldenke, Phytologia 17: 488. 1968; Moldenke, Résumé Suppl. 18: 5. 1969; Moldenke, Phytologia 19: 238 & 244. 1970; Moldenke, Fifth Summ. 1: 175 & 483 (1971) and 2: 507, 587, & 964. 1971; Moldenke, Phytologia 33: 25 (1976) and 35: 303. 1977.

Illustrations: Bong., Mém. Acad. Imp. Sci. St. Pétersb., ser. 6, 2: [Ess. Monog. Erioc.] pl. 14. 1832.

Bongard's original (1831) description of this species is "a-caule; foliis caespitosis vaginis brevioribus patenti-diffusis, linearibus obtusis glabris; pedunculis caespitosis vaginisque adpresse pilosiusculis. T. XIV. Habitat in Brasilia", based on an unnumbered Riedel collection from "auf etwas feuchten Campos" in Minas Gerais, Brazil, probably deposited in the Leningrad herbarium. Kunth (1841) elaborates on the description, but cites no specimens. Ruhland (1903) adds Glaziou 20011, also from Minas Gerais. Silveira (1928) adds A. Silveira 450 from Serra do Cipó, Minas Gerais, collected in 1905.

Segadas-Vianna and his associates encountered this plant in "locais desnudos da restinga arborescente, dominante, substratum arenoso, topografia local plana, umidade mínima, luminosidade máxima, abundância alta, frequência alta". It has been found in anthesis in March and September and in fruit in September.

The Eriocaulon nitidum credited to Buchanan-Hamilton in the synonymy above is a synonym of E. cinereum R. Br. (not of E. sexangulare as stated by Jackson, 1893), while that credited to Blume and to "Hort." is a synonym of E. sexangulare L.

Material of S. nitidus has been misidentified and distributed in some herbaria under the designations S. habraphys Ruhl. and S. habrophyus Ruhl.

Citations: BRAZIL: Minas Gerais: Glaziou 20011 (B, Z), 20014 (B). Rio de Janeiro: Segadas-Vianna, Dau, Ormond, Machline, & Lorêdo I.940 [Herb. Mus. Nac. Rio Jan. 108889] (W--2370794, Z). MOUNTED ILLUSTRATIONS: Bong., Mém. Acad. Imp. Sci. St. Pétersb., ser. 6, 2: 226--227, pl. 14. 1832 (N, Z).

[to be continued]

BOOK REVIEWS

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"GENES, ENZYMES, AND POPULATIONS" edited by Adrian M. Srb, xv & 359 pp., illus., Plenum Publishing Corporation, London NW10 6SE & New York, N. Y. 10011. 1973. \$27.00.

This book is Volume 2 in the Basic Life Sciences and it incorporates the proceedings of the 12th International Latin-American Symposium held in Cali, Colombia near the end of 1972 to consider "Fundamental Approaches to Plant and Animal Improvement" through "basic mechanisms that determine and control phenotypes and the ways in which it is possible to manipulate them, both at the laboratory bench and in the open field, in order to produce new individuals with certain features of greater value to mankind and a greater resistance against natural enemies".

Twenty-six well prepared, illustrated and documented papers cover such topics as the molecular aspects of mitochondrial complementation and heterosis in Triticum, cell and tissue culture techniques as aids in economic plant improvement — with a long list of "banked" items, factors favoring formation of androgenetic embryos in anther culture as in Datura and Nicotiana, repair of radiation and chemical damage to DNA in human cells, chromosome knobs in Latin-American maize, insect control with gamma-rays.